

### Guidelines for Neighborhood Traffic Management



City of Rockville Department of Public Works Traffic and Transportation Division

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### Introduction

"Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."

"Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds, and/or cut-through volumes, in the interest of street safety, livability, and other public purposes."<sup>2</sup>

Rockville is committed to the goal of maintaining livable residential neighborhoods. A major threat to that quality of life is excessive vehicular speed and traffic volume on residential streets. The Guidelines for Neighborhood Traffic Management outlined in this document address policies and recommendations set forth in the transportation chapter of the City of Rockville's Master Plan such as: **Respect and protect neighborhoods from the impacts of regional traffic,** and, **minimize non-local traffic in neighborhoods.** 

Excessive traffic volume on residential streets, especially where neither the origin nor destination of that traffic lies within the neighborhood, is undesirable because it is a danger to life, limb, and property. Excessive traffic volume contributes to increased noise, vibration, air pollution, visual intrusion, and accelerated deterioration of the streets themselves. There are several causes of increased volumes of non-neighborhood traffic using residential neighborhood streets, including congestion and delay on nearby arterial streets, commercial development in areas adjacent to neighborhoods, and residential street patterns that become convenient routes for through traffic.

To counter the effects of excessive traffic volume and speed, the Traffic and Transportation Division has developed strategies to divert or otherwise alter traffic flow through neighborhoods and calm traffic through reduced speed. Remedial measures to reduce traffic volume and speed have proven to be generally successful, both in Rockville and in many other communities. Plans implemented to manage neighborhood traffic create a safer, more pleasant residential environment. An added benefit of traffic diversion techniques is that they reduce incidents of speeding at a proportion equal to or greater than the percentage reduction in traffic volumes.

Lockwood, I.M., "ITE Traffic Calming Definition," ITE Journal, Vol.67 (Washington, D.C.: Institute of Transportation Engineers, July 1997) pp. 22-24

<sup>2.</sup> Ewing, Reid, "Overview: Legal Aspects of Traffic Calming," Compendium of Reference Papers, 1998 ITE Annual Conference (Washington, D.C.: Institute of Transportation Engineers, 1998)

### **Street Classification**

Street classifications in Rockville are summarized in the table below. Each classification serves a different function, and is therefore treated differently with regard to neighborhood traffic management.

The maximum volume threshold for each street classification is defined in the City's Master Plan (see table below). Neighborhood streets with volumes exceeding these thresholds are considered to have a traffic volume problem.

### **Street Classification**

<b>Rockville Classification</b>	Description	Typical Volumes
(Standard Term)		
Limited Access	Carries through traffic. Lanes are	50,000 to 250,000
(Freeway)	divided by a median. Access points	vehicles per day
	are very limited.	
Major	Carries through traffic. Lanes are	Greater than 25,000
(Major Arterial)	divided by a median. Access points	vehicles per day
	are generally limited.	
Arterial	Carries through traffic. Design is	10,000 to 30,000
(Minor Arterial)	more limited than on major streets.	vehicles per day
	Access is less limited.	
Primary Residential –	Distributes traffic between	Greater than 5,000 vehicles
Class I (Major Collector)	neighborhoods and arterial streets.	per day
-	Typically has two traffic lanes.	
Primary Residential –	Distributes traffic between	Up to 5,000 vehicles per day
Class II (Minor Collector)	neighborhoods and arterial streets.	
	Typically has two traffic lanes.	
Secondary Residential	Provides local access to residential	Up to 2,000 vehicles per day
(Access)	properties. All non-primary streets	
	are classified as secondary.	
Business District	Serves adjacent business land use.	5,000 to 20,000
(Major/Minor Collector)	Typically has four undivided traffic	vehicles per day
	lanes.	
Primary Industrial	Serves adjacent industrial and office	5,000 to 20,000
(Major Collector)	land uses. Typically has four	vehicles per day
	undivided traffic lanes.	
Secondary Industrial	Serves adjacent industrial and office	Up to 2,000 vehicles per day
(Minor Collector)	land uses. Typically has two	
	undivided traffic lanes.	

### Scope of Guidelines and Relation to Other Policies

These guidelines provide a uniform policy for implementing neighborhood traffic management plans in the City of Rockville. The scope of these guidelines is generally limited to the application of controls that divert excessive traffic around residential neighborhoods and devices used to reduce vehicular speed on residential streets. Other City policies that should be considered during the site evaluation and concept steps of this document include Complete Streets, Pedestrian Policies, and the Bikeway Master Plan.

The primary sources of the City's traffic control policies are the Manual on Uniform Traffic Control Devices (MUTCD) and engineering practices outlined by the Institute of Transportation Engineers (ITE), the national standard for determining selection and use of various traffic controls. Federal and State laws require City compliance with the mandatory aspects of the MUTCD. Additionally, the advisory aspects set forth by the MUTCD were adopted as City policy in 1989 in Mayor and Council Resolution 3-89. The MUTCD is supplemented in Rockville by the guidelines in this document because the MUTCD does not explicitly discuss diversionary traffic controls to protect neighborhoods. The policies contained herein replace traffic control policies previously established by the City, such as the 1991 Neighborhood Traffic Management Policy and Speed Hump Policy, and the more recent 2002 Guidelines for Neighborhood Traffic Management.

Neighborhood traffic management strategies fall into two categories:

### 1) Passive Controls (signs)

- a. Turn Prohibitions (peak hour, daytime, 24 hour)
- b. Entry Prohibitions (peak hour, daytime, 24 hour)
- c. One-Way signs (24 hour only)
- d. Increased Moving Violation Fines (i.e. double fine in school zone)
- e. Variable Speed signs
- f. Warning signs

### 2) Physical Controls

- a. Diagonal Diverters barriers placed diagonally across an intersection (4-way) to prevent through movements and force turns.
- b. Semi-Diverters barriers placed at one corner of an intersection to create a one-way entrance or exit. These can be used to augment entry prohibitions (i.e., DO NOT ENTER) or one-way signs.
- c. Other intersection channelization right turn only "plugs", median closures, "pork chops", etc. that discourage particular turning movements.
- d. Traffic Circles
- e. Speed Humps/Raised Crosswalks
- f. Chicanes a curb "bump-out" that narrows the road as a means of reducing vehicle speed.

- g. Road Narrowing/Chokers, Intersection Narrowing
- h. Additional controls focusing on reducing vehicle speeds, in contrast to controls that address traffic volume.

Projects to implement physical controls are generally capital in nature, and are approved by the Mayor and Council through the Pedestrian Safety Capital Improvement Program (CIP). Larger, more expensive, projects may require specific funding and approval by the Mayor and Council. The process required to secure approval of funding, establishment of priority, and complete design and construction tasks ensures the best use of city funds, however, this process may take considerable time in implementation.

Because these guidelines supplement other established policies, it follows that certain neighborhood traffic control elements are beyond the scope of this document. For example, the use of devices such as stop signs and traffic signals are subject to MUTCD standards. Many other traffic controls typically used in neighborhoods, such as speed limit and regulatory signs, are also the subject of existing standards beyond the scope of these guidelines.

While related to speed control, photo enforcement cameras are not included in these guidelines because that program is administered by the Rockville City Police Department. Requests for photo enforcement cameras must be submitted to the City Police and found to be compliant with Maryland Transportation Article 21-809, prior to further evaluation.

Full street closures and/or abandonments are not included in this document because such actions require a special hearing and final approval by the Mayor and Council. This process is described in Chapter 21 of the Rockville City Code.

With the exception of photo enforcement cameras and street closures and/or abandonments, policies for traffic control on all City streets are administered by the Traffic and Transportation Division of the Department of Public Works. The Division is headed by the City's Chief of Traffic and Transportation, with general oversight from the Director of Public Works. Final authority for all traffic regulations on City streets, including those proposed under these guidelines, rests with the City Manager (Section 23-3, Rockville City Code). The Mayor and Council must approve any traffic project requiring capital expenditure. The City's Traffic and Transportation Commission develops and recommends traffic policies and standards for approval by the Mayor and Council, and for use by the Traffic and Transportation Division.

### **Eligibility for Traffic Diversion Plans**

A particular street or group of streets can be considered for *a traffic diversion plan* when any of the minimum requirements contained in **Table A** are met. Only primary residential class II and secondary residential streets are eligible for consideration. A listing of these streets is available from the Traffic and Transportation Division.

### **TABLE A**

### **Eligibility Criteria for Residential Traffic Diversion Plans**

For <u>secondary residential</u> streets, any one of the following:

### A minimum of:

- a. 2,000 vehicles per day in both directions, or
- b. 200 vehicles in any hour in both directions, or
- c. 150 vehicles in any hour in one direction

For <u>primary residential class II</u> streets, any one of the following:

### A minimum of:

- a. 5,000 vehicles per day in both directions, or,
- b. 500 vehicles in any hour in both directions, or,
- c. 375 vehicles in any hour in one direction

### Streets are ineligible for traffic diversion plans if:

- a. The street is classified other than primary residential class II or secondary residential, including arterial streets passing through residential areas.
- b. Part of the residential street provides the primary access to commercial properties and alternate access is inadequate or infeasible.
- c. The street currently has a traffic diversion plan in effect.
- d. The street is precluded by Master Plan, or other overriding City policy.
- e. A request for traffic diversion was denied within the last three years, or final plans were denied for implementation.

### **Eligibility for Speed Control Plans**

A particular residential street may be considered for *a speed control plan* if the requirements in **Table B** are met.

### TABLE B

### **Eligibility Criteria for Residential Speed Control Plans**

Streets will be considered for speed control only after passive controls (signs) or directed police enforcement have been applied. Assuming that all other reasonable speed control strategies have been considered or exhausted, streets are eligible for physical speed control if the requirements below are met.

For <u>secondary</u> <u>residential</u> streets, all of the following:

- a. A minimum of 500 vehicles per day
- b. 85<sup>th</sup> percentile speed exceeding the posted speed limit by at least 7 mph
- c. Minimum segment length of 600 feet

### For <u>primary residential class II</u> streets, all of the following:

- a. A minimum of 1,500 vehicles per day
- b. 85<sup>th</sup> percentile speed exceeding the posted speed limit by at least 9 mph
- c. Minimum segment length of 600 feet

### For primary residential class I streets, all of the following:

- a. A minimum of 2,000 vehicles per day
- b. 85<sup>th</sup> percentile speed exceeding the posted speed limit by at least 14 mph
- c. Minimum segment length of 600 feet

### Streets are <u>ineligible</u> for speed control devices if:

- a. The street is classified other than primary or secondary residential, including arterial streets passing through residential areas.
- b. The street has a posted speed limit of less than 25 mph.
- c. The street is used as a routine emergency service route or a major public transit route.
- d. The street is scheduled for resurfacing within the next two budget years. If the request meets all other criteria, the street would become eligible for speed control devices immediately following completion of resurfacing.
- e. Excessive traffic volume would be diverted to other residential streets.
- f. A request for speed control was denied within the last three years, or final plans were denied for implementation.

### **Priority for Speed Control**

Because funding for speed control devices is limited by an annual capital budget, it may not be feasible for the City to construct all eligible projects. In order for City staff to establish eligibility, written citizen requests and a petition must be submitted by April 1. City staff will rank eligible projects by descending order of the recorded 85<sup>th</sup> percentile speed and adjust that order by the relationship between the subject location and the nearest recorded top vehicular speed location.

In the event that funding is a limiting constraint, the highest-ranked projects, up to the annual funding limit, will be funded during the budget year beginning July 1. Eligible projects that were prioritized, but not completed within that fiscal year, will remain at the top of the list for the next fiscal year. Staff may recommend priority adjustment to the Mayor and Council in order to move up new projects based on the severity of the problem. A project may remain a candidate for no more than three years before its eligibility must be re-established. City staff reserves the right to modify priorities on factors such as a lack of pedestrian facilities or the presence of irresolvable visibility restrictions.

Should a request for a ranked project fail or, if agreement among City staff, local representatives, and the affected local civic association (as appropriate) cannot be achieved, then the project will be dropped from the program and replaced by the next highest ranking project on the eligibility list. A project that fails may not re-apply for three years.

### **Implementation for Traffic Diversion Plans and Speed Control Plans**

### a) Request

In order to be considered for a neighborhood traffic management plan, the applicant must submit a request and petition (Appendix A) containing signatures from at least ten households (one signature per household), or signatures from at least 50% of the residences on the street, whichever is less. Traffic and Transportation Division staff will acknowledge all requests in writing and will indicate the further eligibility of the street(s) under discussion.

The local civic association, or citizen submitting the initial request to the City, will serve as the point of contact for correspondence between residents and City staff. Wherever possible, the City encourages residents to discuss their concerns with their local civic association and have that association act as a point of contact with the City. If the local civic association is not involved in the initial request, staff will notify that body of the request prior to step b, "Site Evaluation". For proposals having a major impact on area traffic patterns, the City Manager may also direct the participation of the City's Neighborhood Resource Coordinators.

### b) Site Evaluation

Traffic and Transportation Division staff will consult with other City departments to determine the affected area of the project. Division staff will define the affected area and conduct site studies to collect traffic volume and speed data, vehicular accident data, and pedestrian accident data. Staff will also evaluate pedestrian volume and access to pedestrian generators in the vicinity, such as schools, transit, public facilities, and commercial establishments. If eligibility criteria are satisfied for traffic diversion or speed control, Division staff may develop a list of potential controls applicable to the identified problem. If appropriate, this list will be compiled in consultation with the applicant group's representatives and/or the local civic association. Staff will notify residents at this stage in the process if the project does not meet City criteria for a neighborhood traffic management plan.

### c) Concept

The Traffic and Transportation Division will develop a concept plan for neighborhood traffic management to best fit the specific needs of the street and the surrounding neighborhood. This concept plan will be based on the data collected in step b, "Site Evaluation" and will take into consideration the following other factors:

- Curbs and gutters
- Vertical curvature of street (Grade)
- Horizontal curvature of street (Curves)
- School bus routes/ transit routes
- Adjacent arterials
- Existing neighborhood traffic management plans
- Impacts to emergency services (Fire and Rescue)
- Residences fronting on the street
- Sight distances
- Safety considerations
- Bicycle facility planning

### d) Impact of Proposed Neighborhood Traffic Management Plan on Adjacent Streets

Division staff will determine potential impacts of the proposed traffic management plan upon streets adjacent to the neighborhood. Division staff will develop a comprehensive plan to address the needs of the entire affected area (as defined in step b, "Site Evaluation"). Staff may choose to incorporate additional elements if the plan will have an adverse affect on adjacent streets and neighborhoods.

### e) Public Process

The purpose of the public process is to inform the neighborhood of the project and provide those residents with an opportunity to comment on the proposed neighborhood traffic management concept plan. The public process in no way obligates the City to proceed with, or discard, the proposed plan. Final authority for all traffic controls on City streets rests with the City Manager; therefore, the public process is advisory to that authority.

One of the following methods for soliciting public comment shall be used:

- 1. City staff shall mail an informational notice outlining the proposed neighborhood traffic management concept plan to all households within the affected area (as defined in step b, "Site Evaluation"). This notice will describe the proposed plan and request comments from residents.
- 2. City staff shall hold a public meeting to present the proposed neighborhood traffic management plan and request comments from residents.

Under both methods described above, notice shall be given to adjacent civic associations in addition to the local civic association and residents within the affected area. The City Manager will consider comments from the association, residents, and any other interested parties before taking final action on the plan. Comments from the local association will be considered in the City's determination to proceed with the proposed plan.

From the date the public is notified of a proposed design, by one of the methods outlined above, the official record will remain open for a period of not less than 14 days and not exceeding 30 days. All comments and opinions expressed during the public process will be taken into consideration and staff will modify the design as necessary before presenting the project to the City Manager, who will make a final decision to approve and implement the project.

### f) Final Approval and Implementation

Following approval of the plan by the City Manager, the Mayor and Council shall be informed of the analysis and conclusions of the traffic management plan and the scope of the project. Staff will determine the budget for the project and identify the appropriate Capital Improvement Program (CIP) funding.

Prior to installation of traffic diversion signs, Traffic and Transportation Division staff shall prepare legal documentation ("Traffic Order"), as necessary, for approval by the City Manager. Signs controlling vehicular movements to and from State and County roads also require final approval from the State Highway Administration (SHA) and/or the Montgomery County Department of Transportation (MCDOT). Should the City Manager and SHA or MCDOT approve (as necessary), and if no additional capital authorization is involved, the Traffic and Transportation Division shall implement the plan.

If additional capital funding is required, implementation shall follow the Mayor and Council's authorization schedule, allowing time for engineering design as needed.

### g) Revisions to Implemented Plans

Traffic and Transportation Division staff may consider modifications to an approved and installed neighborhood traffic management plan at the request of the affected residents, the local civic association, or as directed by the City Manager. Decisions on modifications shall be made in accordance with the implementation process outlined in

this document. In order to maximize resources within the Pedestrian Safety Capital Improvement Program (CIP) and address neighborhood traffic management issues across the City, however, removal or major modification of a diversion plan within two years of original implementation is strongly discouraged by the City.

**Appendix: Petitions** 

Resident Petition for Speed Control Resident Petition for Traffic Diversion



### SPEED CONTROL PLAN OFFICIAL REQUEST FORM

We, the undersigned residents of the City of Rockville (18 years of age or older), petition the City to install speed control measures at the following location(s):

This preliminary request must be presented to all occupied households in the defined survey area. Abstentions are acceptable but must be listed, and any vacant properties should be noted. Only one signature per household is required. The local civic association or citizen making the initial request to the City will serve as the point of contact. This petition's point of contact is:

Inquiries regarding this petition can be made to the City's Traffic & Transportation Division at (240) 314-8500.

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